## No. 6.— Notes on a Collection of Birds from Yunnan.

### BY OUTRAM BANGS AND JOHN C. PHILLIPS.

The Museum of Comparative Zoölogy acquired in the autumn of 1912 a series of 1,376 bird skins made by a Japanese collector in southern Yunnan. This collection appears to represent well the ornis of the region, and contains, as might be expected, a rather large number of undescribed forms.

Mr. Collingwood Ingram (Novitates zoologicae, Dec. 1912, 19, p. 269-310) has published a complete list of the birds thus far recorded from Yunnan. The basis of his work was a small collection, "a few hundred specimens," apparently from the same source as our own, the localities and dates being the same.

Mr. Ingram's paper mentions from this province 352 species and subspecies, to which we have been able to add seventy-eight, thirteen

of which appear not to have been described before.

The greater part of our collection was made at Mengtsze, near the southern border of the province, from which the other collecting points, Linan Fu, Shi-ping, and Loukouchai are only a short distance away. Mengtsze is an important town, and at the present time the new railroad runs by within a few miles of it. The town is situated on a plateau of red sand or clay, at an elevation of about 4,500 feet. The plain is some twenty by twelve miles in extent, and is bordered by mountains, at a distance of about a day's journey from the town, which run up to 8,000 feet.

Mr. E. H. Wilson, the well-known botanist and traveller, who has visited Mengtsze, informs us that the country is a rather poor one, the population having been sadly depleted by the Mohammedan war and by bubonic plague. Forested areas are now to be found only on the higher hills, the Mengtsze plain being entirely denuded of trees and composed largely of grass land. The climate is healthy and comparatively cool for the tropics. There is only a short rainy season in mid-summer and the rest of the year is dry and sunny. The region is fairly well watered and there is some artificial irrigation. Rice, maize, sugar-cane, and sweet potatoes are grown, but agriculturally the country is not at all a rich one.

It is probable that most of the bird collecting was done in the forest of pine and mixed deciduous trees upon the hills near Mengtsze, as

Mr. Wilson informs us that the plain about the city is almost birdless. The region appears to be a favorite winter resort for many species of birds, whose breeding grounds are either in the higher mountains near by or in north central and eastern China. The series of a species often contains two subspecies, one, sometimes both of which do not breed in the immediate vicinity. This is made evident by the date on the labels, although no field notes accompanied the collection. Bird collecting was carried on through every season of the year, and the commoner resident species are almost always represented by skins in fresh autumnal or winter dress, and by well-worn summer specimens.

We have marked with an asterisk, each species not in Ingram's list. All measurements are given in millimeters, and for all new descriptions Ridgway's color standard (Washington, 1912) has been used.

### PHASIANIDAE.

Francolinus Chinensis (Osbeck).

1 ♂, Mengtsze, 26 May, 1911.

\*Arboricola Rufogularis Euroa, subsp. nov.

2 ♂'s, Mengtsze, March, July.

Type:— adult 3, M. C. Z., No. 61,841, Mengtsze, 18 March, 1911. Characters.— General coloration darker and richer, and size larger than in true A. rufogularis Blyth from Sikhim. The white central shaft stripes of the flank feathers are reduced to mere lines; crown greyer and less olivaceous, especially towards the forehead; scapulars and greater wing coverts with larger black areas.

Measurements of the type: wing, 160, tarsus, 42, culmen from base of forehead, 25.

## \* Bambusicola oleaginia, sp. nov.

Type, and only specimen:—adult ♂, M. C. Z. No. 61,839, Mengtsze, 12 December, 1910.

Characters.— Somewhat similar to B. fytchii Anderson, of Assam and Upper Burma, but postorbital region black instead of ferruginous; ground color of upper parts much darker and more olivaceous, with dark central stripes of feathers of the back black instead of ferruginous.

All wing coverts more uniform in color and much darker than in B. fytchii; chest more uniform, almost lacking the white spots; black markings of flanks more extensive and more irregular in shape, the feathers of this region often being nearly solid black barred with white; rump and upper tail coverts plain dark olivaceous, wholly lacking the markings of B. fytchii.

Measurements: wing, 143, tail feathers, 100, culmen, 20.5, tarsus, 48.

### GENNAEUS NYCTHEMERUS (Linné).

1 adult ♀, 2 immature, Mengtsze.

### Phasianus elegans Elliot.

1 adult, ♂, Mengtsze, 27 May, 1910.

This extends the range of *P. elegans* in a southwesterly direction. This specimen is like those in the M. C. Z. from western Szechwan taken by the late Walter R. Zappey.

### TRERONIDAE.

## Sphenocercus sphenurus (Vigors).

Adult ♂ and ♀, Mengtsze, July.

The  $\sigma$  agrees fairly well with the two male specimens from northern India in M. C. Z., but the  $\varphi$  is a much darker green on the upper parts and a slightly richer green below, than in Indian females.

#### COLUMBIDAE.

## Columba Hodgsoni (Vigors).

3 specimens, Loukouchai, Jan., Feb.

These agree entirely with a of from Darjeeling, India, in M. C. Z.

#### Peristeridae.

### TURTUR ORIENTALIS Latham.

3 specimens, all immature, Mengtsze, June, July, Sept.

### Onopopelia humilis (Temminck).

15 specimens, Mengtsze, March, April, May, Sept., Oct., 1910.

### SPILOPELIA TIGRINA (TEMMINCK & KNIP).

6 specimens, Mengtsze, May, July, Aug., Oct.

These specimens are more or less intermediate between *tigrina* and *chinensis*, as Ingram has pointed out (Nov. zool., 1912, **19**, p. 272) in the case of his birds from the same locality, and do not run very true to type. One has very dark shaft stripes on the upper wing coverts but is grey on the under tail coverts.

### RALLIDAE.

## Eulabeornis striatus jouyi (Stegneger).

1 adult &, Mengtsze, Aug., 1910.

Wing 122; this is maximum for the above race according to Stejneger (Proc. U. S. nat. mus., 1886).

## Limnobaenus fuscus (Linné).

14 specimens, Mengtsze, May, June, 1910.

Amaurornis Phoenicura (Forster).

2  $\varnothing$ 's, Mengtsze, March, May.

GALLINULA CHLOROPUS ORIENTALIS Horsfield.

10 specimens, Mengtsze, Feb., May.

#### COLYMBIDAE.

Tachybaptus fluviatilis philippensis (Bonnaterre).

1 adult, 1 immature, Mengtsze, Sept., Nov.

#### LARIDAE.

\* Hydrochelidon leucopareia swinhoei Mathews.

4 specimens, Mengtsze, 6 June, 1911.

These birds are all in immature plumage and probably belong to this race. They are small; wing 193; 195; 200 and 201 mm.

### CHARADRIIDAE.

Microsarcops cinereus (Blyth).

3 specimens, Mengtsze, April, Oct.

Pluvialis dominicus fulvus (Gmelin).

2 specimens, ♂ and ♀, Mengtsze, April, Nov.

CHARADRIUS DUBIUS DUBIUS (Scopoli).

4 specimens, Mengtsze, March, Sept.

## \* Charadrius dubius jerdoni (Legge).

1 adult  $\circ$ , Mengtsze, 5 March. This specimen has a wing only 101.5 mm. long and therefore would seem to belong to the small race that breeds in the Himalayas.

\* Tringa totanus (Linné).

4 specimens, Mengtsze, 10 Sept., 1910.

## \* Tringa nebularia glottoides (Vigors).

8 specimens, Mengtsze, Sept., Oct., Nov., Dec., 1910.

The eastern race of the Green-shanks has been formally recognized by Matthews under the above name. If it can be maintained at all, it certainly is only a very close subspecies. We can find no differences in measurements between eastern and western specimens and no color differences in skins in breeding plumage. In winter plumage eastern skins appear to be just a trifle paler than western ones.

\* Tringa glareola (Gmelin).

11 specimens, Mengtsze, Aug., Sept., Nov., 1910.

Tringa ochropus assami Mathews.

1 9, Mengtsze, 5 Sept., 1910.

\* Xenus cinereus (Güldenstein).

1 &, Mengtsze, 19 Sept., 1910.

\* Pisobia damacensis (Horsfield).

1 &, Mengtsze, 25 April, 1911.

\* LIMOSA LIMOSA MELANUROIDES Gould.

1 ♂, Mengtsze, 1 Sept., 1910.

We quite agree with Mathews that the eastern Black-tailed godwit is a well-marked race, at once differing from the western form by its much inferior size.

GALLINAGO GALLINAGO (Linné).

1 adult 9, Mengtsze, 27 Oct., 1910. This specimen is perfectly typical of the western race of the snipe.

\* Gallinago Gallinago uniclavus Hodgson.

4 specimens, both sexes, Mengtsze, Oct., Dec., 1910, all typical of the eastern form (that breeds in northeastern Siberia).

\* Gallinago strenua (Ruhl).

6 specimens, Mengtsze, Sept., Dec.

\* Scolopax Rusticola Linné.

2 specimens, Mengtsze, March, Dec.

Rostratula bengalensis (Linné).

3 specimens, Mengtsze, May, Sept., Oct.

Cursoriidae.

\* Glareola maldivarum (Forster).

6 specimens, Mengtsze, July, 1910.

GRUIDAE.

Megalornis grus lilfordi (Sharpe).

1 adult unsexed, Mengtsze, but without date.

IBIDIDAE.

\* Ibis melanocephalus (Latham).

1 adult ♀, Mengtsze, 1 May, 1910.

CICONHIDAE.

\* Pseudotantalus leucocephalus (Gmelin). 5 specimens, Mengtsze, Aug., Oct., Nov.

ARDEIDAE.

HERODIAS INTERMEDIA Wagler.

6 specimens, Mengtsze, July, Aug.

\* Nycticorax nycticorax nycticorax (Linné).

1 & and 1 & Mengtsze, Sept.

BUTORIDES JAVANICA JAVANICA (Horsfield).

3 specimens, Mengtsze, Aug., 1910.

Bubulcus coromandus (Boddaert).

2 specimens, Mengtsze, 1 Aug., 1910.

IXOBRYCHUS SINENSIS (Gmelin).

1  $\sigma$  and 1  $\circ$ , Mengtsze, 16 June, 1911.

IXOBRYCHUS CINNAMOMEUS (Gmelin).

7 specimens, Mengtsze, April, May, June.

ANATIDAE.

\* NETTION CRECCA (Linné).

1 9, Mengtsze, Oct.

FALCONIDAE.

CIRCUS MELANOLEUCUS (Forster).

4 specimens, both sexes, Mengtsze, Feb., April, May.

\* Circus Aeruginosus (Linné).

1 specimen, unsexed, Mengtsze, May, 1910.

\* Circus spilonotus Kaup.

1 9, Mengtsze, March.

Accipiter nisus (Linné).

4 specimens, Mengtsze, June, Oct., Nov.

\* Lophospizias trivirgatus (Temminck).

 $1\ \ \ensuremath{\eth}$ , Mengtsze, Sept., 1910.

CERCHNEIS TINNUNCULUS JAPONICUS (Temminck & Schlegel).

1 ♂ and 1 ♀, Mengtsze, 27 Oct., 20 Nov.

## CERCHNEIS TINNUNCULUS SATURATA Blyth.

6 specimens, Mengtsze, 11 March, 8 April, 20 July, 16 Oct., 27 Oct., 25 Nov.

These examples are extreme of this large, very dark form, while the two specimens of *C. t. japonicus* are typical of that race. The birds collected in Szechwan and Hupeh by Mr. W. R. Zappey and referred to *saturata* by Thayer and Bangs, prove in the light of this material, to be almost exactly intermediate between *saturata* and *japonicus*.

### STRIGIDAE.

## \* Otus Malayana (Hay).

1 ♂ and 1 ♀, adults, Mengtsze, 12 Oct., 16 Oct., 1910.

The  $\sigma$  is in the brown phase and the  $\circ$  in the grey.  $\sigma$  wing, 85;  $\circ$  wing, 93. These birds unquestionably are referable to this species.

Ingram recorded Otus lempiji erythrocampe (Swinhoe) from Mengtsze, but our collection from the same place contained no Scops owl belong-

ing to that group of the genus.

### \* Ninox scutulata burmanica Hume.

2 adults, 19, one with sex undetermined, Mengtsze, 29 July, 16 Oct., 1910.

No Ninox was listed from Yunnan by Ingram, but a specimen from Quaylom, Yunnan, taken by Anderson had been recorded by Sharpe

(Cat. birds Brit. mus., 2, p. 162).

Our two skins appear to belong to this form, which even Hartert (Vögel Paläark. fauna) says he does not know very well. They are much larger than two Malacca trade skins of N. scutulata malaccensis (Eyton) in M. C. Z. Compared with several specimens of N. scutulata scutulata (Raffles) from the Riu Kiu Islands and the Philippines the Yunnan birds while of the same size, are of a different shade of brown above and have very greyish heads. They are also somewhat.

different below, the ground is slightly paler and the markings, especially on the belly, have a more transverse and less longitudinal appearance.

### CORACIIDAE.

\* Eurystomus orientalis calonyx Sharpe.

1 ♂, Mengtsze, 12 Oct., 1910.

### ALCEDINIDAE.

ALCEDO ISPIDA BENGALENSIS Gmelin.

8 specimens, Mengtsze, Feb., April, June, Aug., Nov.

\* Halcyon Pileatus (Boddaert).

5 specimens, Mengtsze, April, Sept., Oct.

HALCYON SMYRNENSIS FUSCUS (Boddaert).

24 specimens, Mengtsze, May, June, July, Aug., Sept., Oct., Nov.

#### MEROPIDAE.

MEROPS PHILIPPINUS Linné.

13 specimens, Mengtsze, April, July, Aug., Sept.

#### UPUPIDAE.

Upupa epops saturata Lönnberg.

10 specimens, Mengtsze, Feb., March, Aug., Sept., Oct. All of these are referable to this form which is probably only a migrant in southern Yunnan.

UPUPA EPOPS, sub. sp.?

14 specimens, Mengtsze, May, June, July, Aug., Oct., Nov.

This series represents the breeding Hoopoe of the region. While nearer to saturata than to any of the other subspecies, this race cannot quite be referred to that form. The specimens in the series do not run true. Some approach indica in the character of the crest-feathers, although not nearly so reddish in general coloration as are extreme examples of that form. Others can hardly be separated from European examples of true cpops. While others again might easily pass for saturata.

Many of the specimens were in worn breeding plumage when killed. We regret leaving this bird without a name, and perhaps all specimens from the region should be referred to *saturata*, with the statement that the breeding individuals are not typical, but such a course seems unscientific.

#### CAPRIMULGIDAE.

CAPRIMULGUS MONTICOLA Franklin.

1 ♂, Mengtsze, 1 Aug., 1910.

\* Caprimulgus Macrurus ambiguus Hartert.

# 1 ♀, Mengtsze, 4 Dec., 1910.

### MICROPODIDAE.

Apus affinis subfurcatus (Blyth). 7 specimens, Mengtsze, April, June; Loukouchai, June.

#### CUCULIDAE.

- \*Hierococcyx sparveroides Vigors.
  1 specimen, without data.
- \* Cuculus canorus telephonus Heine. 3 specimens, Mengtsze, 3 to 15 May, 1911.
- \* Cuculus canorus bakeri Hartert. 6 specimens, Mengtsze, April, May, June, July.

These skins agree exactly with Hartert's description, showing all the characters of the subspecies. This form is the breeding bird of the region, and *telephonus*, of course, is only a migrant in southern Yunnan.

CUCULUS OPTATUS Gould.

1 adult ♂, Mengtsze, 8 April 1911.

CACOMANTIS MERULINUS (Scopoli).

11 specimens, Mengtsze, May, Aug., Sept.

Eudynamis orientalis honoratus (Linné).

17 specimens, Mengtsze, April, May, June, July, Sept., Oct.

CAPITONIDAE.

CYANOPS DAVISONI (Hume).

1 ♂ 1 ♀, Loukouchai, Feb., June.

\* Cyanops franklini (Blyth).

6 specimens, Loukouchai, Jan., Feb., 1911.

PICIDAE.

Picus canus sordidior Rippon.

8 specimens, Mengtsze, March, July, Nov.; Shi-ping, Feb., March.

Dryobates hyperythrus subrufinus (Cabanis & Heine).

1 9, Mengtsze, 14 March.

The present example of this rare bird agrees exactly with the two specimens from Szechwan collected by Mr. W. R. Zappey.

DRYOBATES CABANISI CABANISI (Malherbe).

5 specimens, Mengtsze, Oct., 1910, Jan., 1911; Shi-ping, Feb., March, 1911; Linan Fu, Feb., 1911.

DRYOBATES PYGMAEUS SCINTILLICEPS (Swinhoe).

10 specimens, Linan Fu, Feb.; Mengtsze, March, April, Sept., Nov.; Loukouchai, Feb.

PICUMNUS INNOMINATUS CHINENSIS (Hargitt).

3 o's, Mengtsze, April, 1911; Loukouchai, Dec., 1910, Feb., 1911. These skins are slightly smaller and in color somewhat brighter on the lower back than a specimen collected by Mr. W. R. Zappey in Hupeh.

\* Sasia ochracea Hodgson.

1 adult J. Loukouchai, Jan., 1911.

JYNX TORQUILLA JAPONICA Bonaparte.

10 specimens, Mengtsze, Oct., Nov.; Loukouchai, Dec.; Shi-ping, Feb.

#### HIRUNDINIDAE.

CHELIDON RUSTICA GUTTURALIS (Scopoli).

8 specimens, Mengtsze, April, May, June, July, Oct.; Loukouchai, Dec.

CHELIDON TYTLERI (Jerdon).

4 specimens, Mengtsze, Dec., 1910.

\* Chelidon Daurica striolata (Temminck & Schlegel).

3 specimens, Mengtsze, June, 1911.

### MUSCICAPIDAE.

\* Cyornis tickelliae glaucicomans Thayer & Bangs.

6 specimens, Mengtsze, April, June, Aug., Sept., Oct.

\* NILTAVA SUNDARA DENOTATA, subsp. nov.

2 specimens, ♂ and ♀, Mengtsze, Oct., Dec.

*Type:*— adult ♂, M. C. Z., No. 61,905, Mengtsze, 14 October, 1910.

Characters.— Similar to true N. sundara but slightly larger; back pure black, not washed with purple as in the latter form; underparts paler yellowish especially on the lower abdomen; chin and throat solid black, not at all washed with purple; neck spot pale blue. (Rood's blue, Ridgway, 1912); blue of head abruptly contrasted with the black of the mantle.

Measurements:  $\mathcal{O}$ , Type, wing, 83, tarsus, 21, culmen from base of forehead, 16;  $\mathcal{O}$ , No. 61,906 M. C. Z., wing, 78, tarsus, 22, culmen, 17.

### \* NILTAVA DAVIDI La Touche.

3 specimens, both sexes, Mengtsze, April, Oct.

Thayer and Bangs (Bull. M. C. Z., 1909, **52**, p. 141) overlooked La Touche's name when describing their Niltava lychnis. There is, however, a chance that their bird from Hupeh is subspecifically distinct from N. davidi La Touche, which came from northwestern Fokien. The two males in the present collection agree almost exactly with La Touche's description of N. davidi and differ from the type of N. lychnis in having the crown brighter blue and the chin, sides of the head and throat washed with dark, bluish purple, whereas in the type of N. lychnis these areas are dead black.

Muscicapa Latirostris (Raffles).

5 specimens, Mengtsze, Feb., May, Sept.

\* Muscicapa muttui Layard.

I ♂, Mengtsze, 14 April, 1911.

MUSCICAPA STROPHIATA Hodgson.

2 specimens, 1 & and 1 & Mengtsze, Nov., 1910, April, 1911.

\* Muscicapa parva albicilla Pallas.

4 specimens, Mengtsze, April, Oct.

Muscicapa melanoleuca melanoleuca Hodgson.

3 specimens, Mengtsze, March, Oct.

\* Muscicapa Mugimaki Temminck.

1 ♂, Mengtsze, April, 1911.

CHELIDORHYNX HYPOXANTHA (Blyth).

4 specimens, Mengtsze, Feb., March, Dec.

RHIPIDURA ALBICOLLIS (Vieillot).

11 specimens, Mengtsze, Feb., March, April, July; Loukouchai, Jan.

\* Hypothymis azurea azurea (Boddaert).

1 ♂ and 1 ♀, Mengtsze, 6 Sept., 16 Oct.

\* Cyanoptila cyanomelana (Temminck).

1 ♂, immature, Mengtsze, 18 Oct., 1911.

TCHITREA INCII (Gould).

11 specimens, Mengtsze, April, Aug., Sept., Oct.

CULICAPA CEYLONENSIS Swainson.

2 specimens, Mengtsze, Oct.

Cryptolopha burkii tephrocephalus (Anderson).
7 specimens, Mengtsze, March, April, Oct.

\* CRYPTOLOPHA TRIVIRGATUS EIUNCIDUS, subsp. nov.

Type, and only specimen: — adult &, M. C. Z., No. 61,985,

Mengtsze, 16 September, 1910.

Characters.— Similar to true C. trivirgatus (Strickland); but general color of underparts very much paler and brighter yellow, clear lemonyellow on throat and chin; sides of head clearer and paler yellow; the black stripes on the top of the head narrower anteriorly; general color of upper parts more yellowish and less greenish; rump and upper tail coverts especially so.

Measurements: wing, 55, tarsus, 17, exposed culmen, 9.

### STOPAROLA MELANOPS (Vigors).

13 specimens, Mengtsze, March, April, July, Aug., Sept., Oct.; Loukouchai, June.

#### CAMPOPHAGIDAE.

Pericrocotus brevirostris ethologus, subsp. nov.

17 specimens, both sexes, Mengtsze, Feb., March, April, July, Sept.;

Shi-ping Feb.; Loukouchai, Dec.

On comparison of a large series of specimens it seems best to divide *P. brevirostris* (Vigors) into three subspecies, based on the coloration of the adult male plumage. The forms are about alike in size, and the females of the three are rather similar. Oates (Fauna of British India), has already alluded to the differences in color shown by the two Indian forms. The Chinese is quite different from either and has the under wing coverts and axillars nearly as yellow as in *Pericrocotus igneus* Blyth although otherwise not in the least like that species.

Vigors's description and Gould's figure, both based on the same specimens, clearly were taken from the eastern form of intense colora-

tion; M'Clelland's P. affinis is synonymous.

The Yunnan skins are not typical of the Chinese form as defined below, and though nearer to it than to true *P. brevirostris* are inter-

mediate, as might be expected on geographical grounds, between the two.

The three races may be briefly defined as follows:—

1. Pericrocotus brevirostris brevirostris (Vigors).

Range.— Eastern Himalayas from Sikkim and Assam, through Manipur etc. to Tenasserim.

Characters.— Adult ♂ with the red of underparts and rump intense scarlet, sometimes almost scarlet-red; under wing coverts and axillars Grenadine red.

2. Perierocotus brevirostris flavillaceus, subsp. nov.

Type: — Adult ♂, M. C. Z. No. 24,146, Koolloo Valley, northern India. M. M. Carleton.

Range.— More western Himalayas and Plains of India.

Characters.— Adult ♂ with the red of underparts and rump, including the under wing coverts and axillars Grenadine red.

3. Pericrocotus brevirostris ethologus, subsp. nov.

*Type*: — Adult ♂, M. C. Z., No. 51,487, Hsienshan, Hupeh, China, May 28, 1907, W. R. Zappey.

Range.— Central, western, and northern China. (Birds from south-

ern Yunnan are not typical).

Characters.— Adult of with the red of underparts and rump, flame scarlet, much mixed with orange on chest, and with white on belly; under wing coverts and axillars much yellower than in the other forms — orange-chrome; throat decidedly more greyish black than in the other races.

Pericrocotus roseus (Vieillot).

2 ♂'s, Mengtsze, March, Oct.

\* Pericrocotus cantonensis Swinhoe.

6 specimens, Mengtsze, April, Oct.

\* Campophaga lugubris (Sundeval).

3 specimens, Mengtsze, March, Oct.

Самрорнава меlanoptera (Rüppell).

8 specimens, Mengtsze, March, April, May, Oct.

### Pycnonotidae.

Chloropsis Hardwickei Jardin & Selby.

5 specimens, Loukouchai, Jan., Feb.

Hypsipetes leucocephalus (Gmelin).

16 specimens, Mengtsze, March, April, Nov.

IOLE HOLTI Swinhoe.

16 specimens, Mengtsze, Jan., March, April; Loukouchai, Jan., Feb.

CRINIGER TEPHROGENYS HENRICI Oustalet.

5 specimens, Loukouchai, Feb.

\* Alcurus striatus paulus, subsp. nov.

2 specimens, Loukouchai, Feb.

Type: — Adult ♂, M. C. Z. No. 62,006 Loukouchai, 5 February, 1911.

Characters.— Similar in color to true striatus of the Himalayas, but size much less.

#### Measurements:

		wing	culmen	tarsus	tail feathers
07	62,006	102	15	18	90
Q	62,007	93	13	18	83

Remarks.— Oates (Fauna of British India, 1889) pointed out the difference in size between birds from the Himalayas and those from Tenasserim and Manipur. Our specimens agree in measurements with those from the latter region and are so much smaller than Himalayan examples as to leave no choice but to give this little form a name.

## XANTHIXUS FLAVESCENS (Blyth).

1 ♂, Loukouchai, 7 Feb., 1911.

Pyconotus atricapillus (Vieillot).

2 specimens, Mengtsze, March, April.

Pyconotus xanthorrhous J. Anderson.

5 specimens, Mengtsze, Jan., 1911; Loukouchai, Feb.

\* Spizixus semitorques Swinhoe.

5 specimens, Loukouchai, Jan., Feb., Dec.

SPIZIXUS CANIFRONS INGRAMI, subsp. nov.

6 specimens, Mengtsze, March, Aug., Sept.; Loukouchai, Dec. Type; — Adult 3, M. C. Z. No. 62,008, Mengtsze, 18 March, 1911.

Characters.— Similar to true canifrons of the Khasi Hills, Manipur; but throat grey and not brown; ear coverts pale ashy grey; underparts dull olive-green, not greenish yellow as in true canifrons. Size similar.

### Measurements:

		wing	culmen	tarsus	tail feathers
3	62,008	95	12	20	92
Q	62,009 topotype	92	11	19	82

Remarks.— All the above characters were noticed by Ingram but he hesitated to give the Yunnan form a name on account of insufficient material.

#### TIMELIDAE.

## IANTHOCINCLA CANORA (Linné).

1 &, Loukouchai, 12 June, 1911.

IANTHOCINCLA CINEREICEPS STYANI Oustalet.

1 & Loukouchai, 6 Feb.

Type, and only specimen: — Adult ♂, M. C. Z. No. 62,014, Loukouchai, 11 February, 1911.

<sup>\*</sup> IANTHOCINCLA LUSTRABILA, sp. nov.

Characters.— Somewhat like I. milni David of Fokien but ear coverts grey instead of white; whole top of head and hind neck brilliant mars-orange (Ridgway, 1912) forming a cap sharply contrasted with the olive-colored mantle; lower back, rump, and upper tail coverts medal bronze instead of "golden olive" (David).

Measurements: wing, 99, culmen, 17, tarsus, 40, tail feathers, 107.

### Pomatorhinus macclellandi odicus, subsp. nov.

7 specimens, Shi-ping, Feb., June, Aug., Sept., Oct.

Type: — ♂ adult, Mengtsze, M. C. Z., No. 61,999, 22 June, 1911.

Characters.— Differs from both true P. m. macclellandi Jerdon from Assam and P. m. gravivox David from central China in having sides, flanks, and under tail coverts uniform rich orange rufous. Throat and foreneck unspotted as in true macclellandi, thus differing from gravivox.

### Measurements:

		wing	culmen	tarsus	tail feathers
3	61,999	84	28	35	93
07	62,000	90	30	35	90
07	62,001	87	. 29	36	95
o <sup>71</sup>	62,002	86	28	34	96
Q	62,003	87	27	37	90
Q	62,004	89	29	36	95
07	62,005	90	30	34	95

Pomatorhinus ruficollis reconditus, subsp. nov.

9 specimens, Mengtsze, Mar., Sept., Nov.; Shi-ping, March; Lou-kouchai, Feb.

*Type*: — adult ♂, M. C. Z. No. 62,046, Mengtsze, 22 November, 1910.

Characters.— Similar to true *P. ruficollis* Hodgson of the Himalayas and to *P. ruficollis styani* Seebohm of the Yangtsze Valley, but differing from both in the co'or of the bill which is wholly yellow except for a small dusky patch at base of upper mandible; in color differing from true *ruficollis* in being much more olivaceous and less reddish brown above, tail and wings more olivaceous and less reddish brown; stripes on breast much more distinct and in the adult bright ferruginous; from *styni* the new form differs in color in being very

slightly darker on the upper parts the striping below is very different, being more distinct and much more ferruginous. Our bird differs from *P. stridulus* Swinhoe which Hartert regards as a species, in lacking the sharp contrast between the colors of the back and tail and in having a much longer bill.

### Measurements:

			culmen		
		wing	to base of forehead	tarsus	tail feathers
07	62,046	74	23	30	85
071	62,047	76	23	30	85
07	62,048	80	24	30	83
♂	62,054	72	24	29	80

### DRYONASTES SANNIO (Swinhoe).

23 specimens, Mengtsze, Jan., April, May, June, July, Aug., Sept.; Loukouchai, Jan., June.

The specimens of this long series differ a little in color from those taken by Zappey in Hupeh and Szechwan, being slightly more olivaceous and less rusty brown on the upper side. We have seen no specimens of *D. sannio* from the type locality, Amoy, if it and the Hupeh birds are the same, then *D. albosuperciliaris* of Godwin and Austen from Manipur Valley near Kaibi, which is usually thrown into synonymy, may apply to our Yunnan birds.

## Pyctorhis sinensis (Gmelin).

22 specimens, Mengtsze, Jan., April, May, June, Sept., Nov., Dec.; Loukouchai, June, Dec.

## \* Alcippe nepalensis hueti (David).

11 specimens, Mengtsze, Jan., Feb.

These birds cannot be distinguished from specimens of true *hueti* taken in Hupch and Szechwan by Zappey.

## Proparus genestieri (Oustalet).

13 specimens, Mengtsze, Jan., March, April, May, Aug., Nov.; Loukouchai, Feb. The average wing measurement of thirteen specimens is only 58 mm. The original description of this bird (Bull. Mus. Paris, 1897, 3, p. 210), gives the wing at 70. Ingram says that four of his five specimens are small, but does not give measurements.

STACHYRIS NIGRICEPS Hodgson.

1 ♂, Loukouchai, 10 Feb., 1911.

STACHYRIIIDOPSIS RUFICEPS (Blyth).

4 specimens, Mengtsze, Feb., Dec.

MIXORNIS RUBRICAPILLA (Tickell).

1 &, Mengtsze, 18 June, 1911.

\* Myiophoneus caeruleus (Scopoli).

1 adult ♂, Mengtsze, 3 May, 1911.

Myiophoneus Eugenei Hume.

8 specimens, Mengtsze, March, 1911; Loukouchai, Feb., Dec.

\*Brachypteryx cruralis senensis Rickett.

1 adult ♂, Mengtsze, 28 March, 1911.

This example agrees exactly with Rickett's description of the north-western Fokien bird. It probably is only a migrant in Yunnan.

\* Actinodura ramsayi Yunnanensis, subsp. nov.

18 specimens, Mengtsze, May; Loukouchai, Jan., Feb., Dec. Type:—adult ♂, M. C. Z. No. 62,025, Loukouchai, 29 January, 1911.

Characters.— Similar to true A. ramsayi Walden of the Karen-nee Hills, Burma, but much smaller, wing 81 to 87, tarsus 24 to 30, and color of crown much deeper brown (Sudan brown to antique brown, Ridgway, 1912).

### Measurements:

		wing	culmen	tarsus	tail feathers
3	62,025	85	14	30	112
9	62,015	S5	14	28	114

Malacias desgodinsi (David & Oustalet).

4 specimens, Loukouchai, Feb.

SIVA CYANUROPTERA WINGATEI Ögilvie-Grant.

19 specimens, Mengtsze, March, April, Aug., Sept., Oct., Nov., Dec.

In this long series the character given by Ingram is very apparent, viz.:— "Secondaries never margined posteriorly, with a distinct white edge as in *cyanuroptera*." They are however sometimes slightly tipped with white.

SIVA CASTANEICAUDA Hume.

1 ♂ and 1 ♀, Mengtsze, Jan., Feb.

Yuhina diademata Verreaux.

4 specimens, Loukouchai, Feb., Dec.; Mengtsze, March.

YUHINA OCCIPITALIS Hodgson.

2 specimens, Mengtsze, Jan.

Ixulus flavicollis rouxi Oustalet.

10 specimens, Mengtsze, Jan., Feb., March.

LEIOTHRIX LUTEA LUTEA (Scopoli).

3 specimens, Mengtsze, Feb.

PTERYTHIUS AERALATUS Tickell.

1 ♂, Loukouchai, 13 Feb., 1911.

## \* Pterythius melanotis Hodgson.

1 ♂ and 1 ♀, Loukouchai, Feb.

### MESIA ARGENTAURIS Hodgson.

1 ♂, Loukouchai, 6 Feb.

### \* Minla Jerdoni J. Verreaux.

8 specimens, adults of both sexes, Mengtsze, Jan., Feb., Sept. Ingram refers the specimens examined by himself, from western Yunnan to *Minla igneitineta* Hodgson. Our skins, however, all winter and autumn killed, belong to the Chinese form having olive backs, and wholly bright yellow underparts and under wing coverts, the sides flecked with olive-green.

Probably the species is a winter visitor only to our region.

### \* PARADOXORNIS GUTTATICOLLIS David.

3 males, Mengtsze; Loukouchai, Feb., March, Dec.

## \* Suthora webbiana Webbiana Gray.

3 specimens, both sexes, Loukouchai, Jan., Feb., 1911.

On geographical grounds one might expect these skins to be referable to S. w. suffusa Swinhoe. Such, however, is clearly not the case. The crown and edges of the primaries in all three examples is rich vinaceous rufous and the back is of the shade peculiar to true webbiana and different from the shade shown in suffusa.

All three were taken in winter and the collection contains no summer nor spring examples; it is therefore, we think, safe to assume that they were merely winter stragglers of the northern form. The specimens afford the following measurements in mm.

2 - 1	60.056	wing	culmen	tarsus	tail feathers
♂ ad.	62,956	49.	0	19.5	55.
♀ ad.	62,957	50.	8.5	20.	60.
♀ ad.	62,958	47.	7.5	19.	58.

### TROGLODYTIDAE.

## \* PNOEPYGA PUSILLA Hodgson.

1 adult 9, Mengtsze, 18 March, 1911.

We have no specimens for comparison. The adult  $\circ$  seems rather larger than measurements given for Indian birds and it may prove to belong to a different race. Wing, 50, tarsus, 19, exposed culmen, 9.

### TURDIDAE.

OREOCINCLA AUREUS (Holandre).

5 specimens, Mengtsze, Jan., Feb., Oct.

\* Turdus obscurus Gmelin.

6 specimens, Mengtsze, Oct., Nov.

Turdus fuscatus Pallas.

12 specimens, Mengtsze, March, Nov.; Shi-ping, March; Linan Fu, Feb., Loukouchai, Dec.

Turdus merula mandarinus Bonaparte.

11 specimens, Shi-ping, March; Linan Fu, Feb.

Monticola erythrogaster (Vigors).

1 adult ♂, Loukouchai, 8 Dec., 1910.

Monticola solitarius pandoo (Sykes).

19 specimens, Mengtsze, Jan., March, July, Nov.; Loukouchai, Jan., Feb., June, Dec.; Shi-ping, Feb.; Linan Fu, Feb.

The series taken by Mr. Zappey in Hupeh and Szechwan should have been referred to this race (Mem. M. C. Z., 40, p. 175).

## \* ENICURUS GUTTATUS BACATUS, subsp. nov.

1 ♂ and 1 ♀, Loukouchai, Feb.

Type:— Adult ♀, M. C. Z. No. 62,033, taken at Loukouchai, 14 February, 1911.

Characters.— Very similar to true guttatus Gould, of India; size about the same, but immediately recognized by the much larger and more numerous white spots on the back, the maximum diameter of which is 4 mm.

### \* Enicurus schistaceus Hodgson.

7 specimens, Loukouchai, Feb., Dec.

## Chaimarrornis Leucocephala (Vigors).

14 specimens, Mengtsze, Nov., Jan., Feb., March; Loukouchai, Dec., Jan., Feb., April.

Rhyacomis fuliginosa fuliginosa (Vigors).

14 specimens, Mengtsze, Dec., Jan., Feb., Nov.; Loukouchai, Feb.

Phoenicurus auroreus leucopterus (Blyth).

18 specimens, Mengtsze, Jan., March, Oct., Nov., Dec.

PHOENICURUS FRONTALIS Vigors.

2 specimens, Mengtsze, March.

## IANTHIA CYANURA (Pallas).

11 specimens, Loukouchai, Feb., Dec.; Mengtsze, Jan., April, Nov., Dec.

## \* IANTHIA PRACTICA, sp. nov.

1 ♂ and 1 ♀ adults, Mengtsze, April; Loukouchai, Feb. Type:— No. 62,035 M. C. Z., adult ♂, Loukouchai, 14 February, 1911.

Characters.— Adult male most like the adult male of *I. rufulata* Hodgson but the color of the whole upper parts is dark tyrian blue instead of dark ultramarine blue (Ridgway 1912). The superciliary stripe is shining Chapman's blue instead of Rood's blue; shoulder patch somewhat brighter blue; base of the feathers of superciliary region dusky instead of white; white areas of lower parts much whiter and not so clouded with dusky. Size similar except the bill, which is smaller and more slender.

### Measurements:

		wing	culmen	tarsus	tall feathers
3	62,035 type	83	9	25	63
Q	62,036	82	9	25	65

<sup>\*</sup> Calliope Calliope (Pallas).

11 specimens, Mengtsze, April, May.

NOTODELA LEUCURA (Hodgson).

2 ♂'s, Mengtsze, July, Aug.

COPSYCHUS SAULARIS SAULARIS (Linné).

20 specimens, Mengtsze, Feb., March, April, Oct.; Loukouchai, Dec.; Linan Fu, Feb.; Shi-ping, March.

## SAXICOLA TORQUATA INDICA (Blyth).

8 specimens, Mengtsze, Aug., Nov., Dec.; Loukouchai, Feb.

Ingram referred his one male from Mengtsze to this form. Our skins probably also belong here, although they seem somewhat to approach S. torquata stejnegeri Parrot and may be intermediate. All being in winter or in immature plumage renders positive identification rather difficult. They are small, the wing in the series of eight skins, ranging from 67 to 70 mm.

SAXICOLA CAPRATA BICOLOR (Sykes).

2 ♂'s, Mengtsze, Feb., March.

Oreicola ferrea haringtoni Hartert.

11 specimens, Mengtsze, Jan., Feb., March, Oct., Nov., Dec.

### SYLVIIDAE.

Sutoria sutoria phyllorrhaphea (Swinhoe). 8 specimens, Mengtsze, April, May, July, Aug.

- \* Acrocephalus arundinaceus orientalis Temminck & Schlegel. 2 ♂'s, Mengtsze, April, Aug.
  - \* Cisticola cisticola tintinnabulans (Swinhoe). 10 specimens, Mengtsze, Jan., March, April, May, July.

Franklinia Gracilis (Franklin). 8 specimens, Mengtsze, Jan., April, May, Sept.

Oreopneuste subaffinis (Ogilvie-Grant). 1 &, Mengtsze, 3 July, 1910.

Oreopneuste fuscatus (Blyth).

5 specimens, Mengtsze, April, May.

Reguloides proregulus proregulus (Pallas).

1 ♂ and 1 ♀, Mengtsze, June; Loukouchai, Dec., 1910.

REGULOIDES SUPERCILIOSUS SUPERCILIOSUS (Gmelin).
4 specimens, Mengtsze, April, July, Sept., Oct.

Acanthopneuste Borealis Borealis (Blasius). 1 9, March, 1911. ACANTHOPNEUSTE LUGUBRIS (Blyth).

2 ♂'s, Mengtsze, April, May.

\* Acanthopneuste coronata (Temminck).

4 specimens, Mengtsze, Aug.

ACANTHOPNEUSTE TROCHILOIDES (Sundeval).

1 ♂ and 1 ♀, Mengtsze, June, Oct.

ACANTHOPNEUSTE DAVISONI Oates.

1 ♂, Mengtsze, 21 Oct., 1910.

PHYLLERGATES CORONATUS (Jerdon & Blyth).

1 ♀, Mengtsze, 29 July, 1911.

\* Horornis Canturians Swinhoe.

1 ♂, Mengtsze, 18 Nov., 1910.

\* Horornis fortipes davidiana (Verreaux).

2 &'s, Mengtsze, May, June.

SUYA SUPERCILIARIS Anderson.

7 specimens, Mengtsze, April, May, Aug.

Suya crinigera yunnanensis Harrington.

3 specimens, Mengtsze, March, May.

These skins are very dark in color, and agree with the account of this recently described form.

Prinia inornata exter Thayer & Bangs.

12 specimens, Mengtsze, Jan., March, April, June, Sept.

This series agrees with specimens from Szechwan collected by Zappey, although the Yunnan specimens average a trifle smaller and paler.

### LANIIDAE.

LANIUS HYPOLEUCUS Blyth.

3 specimens, Mengtsze, 19, 23, 25 Aug.

\* Lanius schach schach (Linné).

14 specimens, Shi-ping, 4 March; Loukouchai, 20, 21, 22 Dec.; Mengtsze, Jan., March, June, July, Aug., Sept.

LANIUS SCHACII TEPHRONOTUS (Vigors).

1 ♂, Loukouchai, 21 Dec.

Lanius Tigrinus Drapiez.

3 specimens, Mengtsze, April, Aug.

LANIUS NASUTUS NIGRICEPS Franklin.

1 &, Linan Fu, 20 Feb.

\* Lanius fuscatus Lesson.

1 specimen, without exact data.

LANIUS CRISTATUS CRISTATUS Linné.

4 specimens, Mengtsze, May, Sept., Oct.; Loukouchai, Dec.

\* Lanius cristatus superciliosus Latham.

1 ♀, Mengtsze, 12 May.

PARIDAE.

PARUS REX David.

4 specimens, Loukouchai, Feb., March.

Parus major commixtus Swinhoe.

14 specimens, Mengtsze, March, April, Aug., Sept., Oct., Nov., Dec.; Loukouchai, Dec.; Linan Fu, Feb.

AEGITHALISCUS CONCINNUS Gould.
9 specimens, Mengtsze, Jan., Feb., March, Aug., Dec.

### SITTIDAE.

Sitta Europaea Montium La Touche. 1 ♂, Loukouchai, 25 Jan.

Dendrophila frontalis (Horsfield).
4 specimens, Loukouchai, Feb., June, July.

### Zosteropidae.

Zosterops Palpebrosa mussoti Oustalet.

10 specimens, Mengtsze, Jan., April, May, July, Aug., Sept.
The wing averages 52 in this series, just as in Oustalet's series from Szechwan, and the color agrees perfectly with his description. Ingram has suggested that his Yunnan birds may be referable to this race and there seems to us no doubt that this is so.

#### DICALIDAE.

DICAEUM IGNIPECTUS IGNIPECTUS (Hodgson).
4 specimens, Mengtsze, Jan., March; Loukouchai, Feb.

\* Dicaeum olivaceum Walden.

7 specimens, Mengtsze; Loukouchai, April, June, Sept., Oct.

### NECTARINHDAE.

AETHOPYGA SANGUINIPECTUS Walden.

13 specimens, Loukouchai, Feb.; Asanzai, April.

Aethopyga dabryi Verreaux.

28 specimens, Mengtsze, Feb., March, April, Aug.

\* Arachnothera magna (Hodgson). 4 specimens, Loukouchai, Feb.

### MOTACILLIDAE.

Motacilla alba hodgsoni Blyth.

3 specimens, Mengtsze, Sept., Oct.

\* Motacilla alba ocularis Swinhoe.
7 specimens, Mengtsze, Feb., April, June.

Motacilla Boarula Melanope Pallas. 6 specimens, Mengtsze, April, May, Scpt., Oct., Nov.

Budytes citreola citreola (Pallas).
4 specimens, Mengtsze, April.

\* Budytes citreola citreoloides Gould.

1 & Mengtsze, 7 March, 1911.

Dendronanthus indicus (Gmelin).
3 specimens, Mengtsze, May.

Anthus trivialis hodgsoni Richmond. 5 specimens, Mengtsze, Jan., April, Oct., Nov.

Anthus richardi richardi Vieillot. 3 specimens, Mengtsze, March, Oct.

Anthus Rufulus Rufulus Vieillot.
5 specimens, Mengtsze, March, April, Aug., Oct.

ANTHUS ROSEATUS Blyth.

1 ♂ and 1 ♀, Mengtsze, April.

\* Oreocorys sylvanus (Hodgson).

1 adult ♂, Mengtsze, 5 June, 1911.

#### Alaudidae.

ALAUDA GULGULA COELIVOX Swinhoe.

3 specimens, Mengtsze, April, Oct.

Wing, 89 to 92. These specimens are strongly and darkly marked on the upper breast and are in general color very reddish. They probably belong to this race, although our series is small for comparison.

### Fringillidae.

\* Eophona melanura migratoria Hartert.

5 specimens, Linan Fu, Feb.

SPINUS AMBIGUUS (Oustalet).

10 specimens, Mengtsze, Jan., Feb., March, Dec.

PASSER RUTILANS CINNAMOMEA (Gould).

3 specimens, Mengtsze, April; Linan Fu, Feb.

Passer montanus Montanus Linné.

11 specimens, Mengtsze, April, Aug., Oct., Nov.

CARPODACUS ERYTHRINUS ROSEATUS (Hodgson).

7 specimens, Mengtsze, Feb., March, April, Dec.

\* Loxia curvirostra himalayensis (Blyth).

1 adult ♂, Mengtsze, 20 March, 1911.

Emberiza pusilla Pallas.

10 specimens, Mengtsze, Jan., March, April, Nov., Dec.

EMBERIZA FUCATA ARCUATA Sharpe.

2 specimens, Mengtsze, March, April.

Emberiza Aureola Pallas.

3 specimens, Mengtsze, April, May.

\* Emberiza Rutila Pallas.

3 specimens, Mengtsze, April; Loukouchai, Jan.

EMBERIZA SPODOCEPHALA MELANOPS Blyth.

5 specimens, Mengtsze, Jan., April, Oct., Dec.

Melophus melanicterus (Gmelin).

25 specimens, Mengtsze, March, April, May, Aug.; Loukouchai, Dec.; Linan Fu, Feb.; Shi-ping, Feb.

#### PLOCEIDAE.

MUNIA PUNCTATA TOPELA Swinhoe.

14 specimens, Mengtsze, Jan., Feb., March, April, Aug., Nov.; Loukouchai, Dec.

Sporaeginthus flavidiventris (Wallace).

10 specimens, Mengtsze, March, May, June, July; Loukouchai, June.

#### STURNIDAE.

SPODIOPSAR NEMORICOLUS (Jerdon).

12 specimens, Mengtsze, April, June, Aug., Oct.

\* Spodiopsar sericeus (Gmelin).

1 &, Linan Fu, 20 Feb., 1911.

Aethiopsar cristatellus Gmelin. 23 specimens, Mengtsze, Jan., March, Aug., Sept., Dec.

### ORIOLIDAE.

Oriolus indicus Jerdon.

7 specimens, Mengtsze, April, May, Sept., Oct.

### DICRURIDAE.

Chibia hottentotta (Linné).

3 specimens, Mengtsze, Sept., Oct.

BUCHANGA ATRA CATHOECA Swinhoe.

21 specimens, Mengtsze, April, May, June, July, Aug., Oct.

Buchanga cineracea pyrrhops (Hodgson).

12 specimens, Mengtsze, Jan., Feb., March, April, Oct.; Shi-ping, Feb., March.

These specimens are similar in color to true *cineracea* but are larger than specimens of that form from Java. They agree with measurements given by Sharpe (Cat. birds Brit. mus.) for *pyrrhops* of Hodgson, by which name they undoubtedly should be known.

## \* Buchanga Leucogenys Leucogenys Walden.

4 specimens, Mengtsze, Oct.

This series agrees with birds from Cochin China and the Malay Peninsula in being dark grey in color. It has been suggested by Hartert (Nov. zool., 17, p. 248) that there may be a northern and southern race.

Our material now shows that such is the case, and that the series of birds collected by Mr. W. R. Zappey in Szechwan and Hupeh are very much paler, almost whitish grey in color. For this pale northern form we propose the name *Buchanga leucogenys cerussata*, subsp. nov.

Type:—Adult ♂, M. C. Z. 52,035 Ichang, Hupeh, China, June

19, 1907, W. R. Zappey.

Characters.— Similar in size to B. l. leucogenys, but much paler and more whitish grey throughout, with light face area larger and more clearly defined.

### CORVIDAE.

Coloeus dauuricus (Pallas).

3 specimens, Mengtsze, June, Dec.

Coloeus neglectus (Schlegel).

1 unsexed, Mengtsze.

PICA PICA SERICEA Gould.

10 specimens, Mengtsze, Jan., Feb., March, May, June, Dec.

Urocissa erythrorhyncha (Gmelin).

10 specimens, Mengtsze, Feb., March, April, Oct., Dec.

DENDROCITTA HIMALAYENSIS (Vigors).

2 specimens, Loukouchai, June.